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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,653	11/18/2003	Mack J. Schermcr	0111453.00122US3	5352
23483	7590	01/10/2008	EXAMINER	
WILMERHALE/BOSTON			HANDY, DWAYNE K	
60 STATE STREET			ART UNIT	PAPER NUMBER
BOSTON, MA 02109			1797	
			NOTIFICATION DATE	DELIVERY MODE
			01/10/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/715,653

Applicant(s)

SCHERMER ET AL.

Examiner

Dwayne K. Handy

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Claims 14-26 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 14-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al. (6,551,557) in view of Feygin (5,957,167). Rose teaches a random access printhead. The device is best shown in Figure 3 and described in columns 6 and 9. The device includes a print head (230) having a rectangular array of transfer tips (200) mounted on a tip holder (236) with a plurality of holes and a plurality of solenoids (238). When each solenoid is energized, the tip base (234) is attracted to the solenoid (238) resulting in the tip moving upward as shown in Figure 3. The Examiner considers the tip

base to meet the broad limitation of a "support" as claimed in claims 18 and 25. Figure 6 shows an O-ring (88 and/or 88') that cushions the pin in the printhead. Rose teaches individual control of the pins in column 9, line 60 through column 10, line 14. The pins may be actuated one at a time or as a group of more than one but less than all of the tips. Rose does not recite the use of pin lifting mechanisms configured to lift a subset of pins or the use of a pneumatic actuator or suction. Rose instead teaches individual actuators for each pin.

Feygin teaches a device for dispensing small volumes of liquid. The device is best shown in Figures 5-8. The device is comprised of an array of fluid dispensing members (200, 300) attached to a rigid base (618), a support (movable stop member #624), and an actuator (614a-614c) comprised of a helical spring. Figure 6 shows an array of dispensing members (300a-300c) controlled by individual actuators (614a - 614c and 618). Figure 7 shows an embodiment of the device in which a group or block of dispensing members are controlled by a single actuating element (714a-714b and 718). Feygin discloses pneumatic, hydraulic or other electrodynamic means for actuators in column 5, lines 5-13. It would have been obvious to one of ordinary skill in the art to combine the block dispensing elements and actuation means from Feygin with the device of Rose. The use of the block actuator from Feygin would allow eliminate the need for a single actuator for each dispenser. This would allow for a simpler design (see Feygin, column 4, line 63) and would use less energy since the number of actuators would be decreased. In addition, the Examiner considers the use of a single actuator for a group of pins as taught by Feygin to be an obvious integration of parts

(i.e. integration of the single actuators used for each single pin in Rose into one actuator for a group of pins). Integration of parts in a known device has been held obvious by the courts. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). See MPEP 2144.04. One would use the pneumatic or hydraulic actuation means to eliminate the need for metal or magnetic pins.

4. Claims 14-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al. (6,551,557) in view of Bienert (6,506,611). Rose teaches a random access printhead. The device is best shown in Figure 3 and described in columns 6 and 9. The device includes a print head (230) having a rectangular array of transfer tips (200) mounted on a tip holder (236) with a plurality of holes and a plurality of solenoids (238). When each solenoid is energized, the tip base (234) is attracted to the solenoid (238) resulting in the tip moving as shown in Figure 3. The Examiner considers the tip base to meet the broad limitation of a "support" as claimed in claim 18. Figure 6 shows an O-ring (88 and/or 88') that cushions the pin in the printhead. Rose teaches individual control of the pins in column 9, line 60 through column 10, line 14. The pins may be actuated one at a time or as a group of more than one but less than all of the tips. Rose does not recite the use of pin lifting mechanisms configured to lift a subset of pins or the use of a pneumatic actuator or suction. Rose instead teaches individual actuators for each pin.

Bienert teaches a device for parallel processing a plurality of fluids. The device includes a metering head having a plurality of metering devices that are controlled

individually or block-by-block with an activating device. The embodiment of the device most relevant to the instant claims is shown in Figure 6 and described in column 11, lines 23-67. Figure 6 shows the block-by-block embodiment that also includes picking needles (251) as the dispenser element. Bienert teaches that the actuating blocks may be used to control smaller subsets of a larger grid (lines 20-23) and may be provided as an interchangeable module to accommodate different size plates (lines 43-52). Bienert discloses pneumatic, hydraulic or electromagnetic means for actuators in column 4, lines 3-8. It would have been obvious to one of ordinary skill in the art to combine the block actuation elements and actuation means from Bienert with the device of Rose. The use of the block actuator from Bienert instead of individual actuators for each dispenser would simplify the device as well as save energy in operation since the number of actuators would be decreased. The use of the block actuator would also allow for control of dispensing into different sized plates. In addition, the Examiner considers the use of a single actuator for a group of pins as taught by Bienert to be an obvious integration of parts (i.e. integration of the single actuators used for each single pin in Rose into one actuator for a group of pins). Integration of parts in a known device has been held obvious by the courts. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). See MPEP 2144.04. One would use the pneumatic or hydraulic actuation means to eliminate the need for metal or magnetic pins.

Response to Arguments

5. Applicant's arguments, filed 10/29/07, with respect to the rejection(s) of claim(s) 14-23 under Bienert have been fully considered and are persuasive. Bienert does not teach a device that is configured to lift the pins when the pin lifting mechanism is actuated and release the pins downward together when the pin lifting mechanism is disengaged. Therefore, the 102 rejection under Bienert has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Rose and Feygin (see Paragraph 3) and Rose and Bienert (See Paragraph 4).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K. Handy whose telephone number is (571)-272-1259. The examiner can normally be reached on M-F 8:00-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DKH
January 6, 2008


Jill Warden
Supervisory Patent Examiner
Technology Center 1700